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Accession number:12988003

Title:Far field subwavelength imaging of magnetic patterns

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Source title:Applied Physics Letters
Abbreviated source title:Appl. Phys. Lett. (USA)
Volume:101
Issue:11
Publication date:10 Sept. 2012
Pages:111102 (4 pp.)
Language:English
ISSN:0003-6951
CODEN:APPLAB
Document type:Journal article (JA)
Publisher:American Institute of Physics
Country of publication:USA
Material Identity Number:AB34-2012-042

Abstract:Far field imaging of subwavelength magnetic objects in real time is a very challenging issue. We propose an original solution based on a planar array of closely spaced split ring resonators. Hybridization between the resonators of such metalens induces subwavelength modes with different frequencies. Thanks to these high Q resonating modes, Purcell like effect allows an evanescent source, close to the metalens, to emit waves that can be collected efficiently in the far field. We present the first microwave experimental demonstration of such metalens to image of a subwavelength magnetic pattern. Numerical simulation shows that this approach is still valid at THz frequencies.

Number of references:21
Inspec controlled terms:lenses - numerical analysis - optical resonators
Uncontrolled terms:THz frequencies - numerical simulation - subwavelength magnetic pattern - microwave experimental demonstration - metalens - evanescent source - Purcell like effect - high Q resonating modes - subwavelength modes - hybridization - closely spaced split ring resonators - planar array - subwavelength magnetic objects - far field subwavelength imaging
Inspec classification codes:A4280A Optical lenses and mirrors - A0260 Numerical approximation and analysis
Treatment:Practical (PRA); Theoretical or Mathematical (THR)
Discipline:Physics (A)
DOI:10.1063/1.4748974
Database:Inspec
IPC Code:G02B3/00